

From: Craig Levy
To: NAZSR 052005; WNV teleconf supplement 061405; WNV weekly teleconf rev 051705; WNV weekly teleconf suppl 100705
Date: Fri, Mar 10, 2006 11:30 AM
Subject: West Nile Virus Surveillance 2006

To: West Nile Virus (WNV) Group
Re: WNV Surveillance 2006

Attached are WNV surveillance protocols for mosquito trapping, sentinel chicken flocks, and dead bird reporting & testing. These protocols are much the same as those used last year, but with a few minor edits. Be sure to share this information with appropriate surveillance staff and with admin. staff that take calls from the public, etc. At the March 29, 2006 Vector-Borne & Zoonotic Diseases Conference in Glendale we will briefly discuss the 2006 WNV surveillance plan (among other things). Hope you can attend.

For the dead bird reporting & testing - please maintain this program for 2006 as this effort may become important in the near future for monitoring other emerging diseases. Also, please check the phone numbers listed for reporting dead birds to be sure the numbers are still current for your county (see below**). If there is a change in this information, please let us know by emailing me, or calling ADHS- VBZD staff at (602) 364-4562.

As stated in a previous email, the overall WNV/SLE surveillance season will kick-off on April 1st. However, we (AZ State Lab, UA-VDL, and VBZD) are prepared NOW to test any high suspicion samples (dead birds, mosquito pools, human bloods/CSF, etc.). Let us know if you need assistance.

Re: larvicide purchases - this has been put on hold temporarily as federal WNV funding is being reduced by 30% (+/-). We will keep you posted on larvicide availability when we have a better picture on funding.

If you have any questions re: the 2006 WNV surveillance program, please contact ADHS-VBZD Program staff at (602) 364-4562.

Attached are:

- (1) Mosquito Surveillance Protocol
- (2) Sentinel Chicken Protocol
- (3) Dead Bird Questionnaire (for triaging dead bird calls - share w/ admin. staff)
- (4) Dead Bird Submission Guidelines
- (5) Dead Bird Selection Criteria
- (6) Dead Bird Reporting - Listing of County Phone Numbers** (please check)
- (7) Dead Bird (or Other Animal) Lab Submission Form

bye

CC: Fink, Michael; Frank, William; Lawaczeck, Elisabeth; Wampler, Christine

should point down. (Note: do not staple the blood end). Please label the card with the following information:

“CHICKEN BLOODS”, COUNTY, AGENCY, SITE/LOCATION, DATE

- 4. Place the card w/ blood strips (fully dried!) in a ziplock bag, and mail (along with submission form) to:**

Arizona State Health Laboratory

Attn: Virology

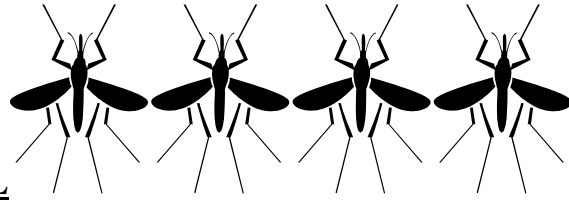
250 North 17th Avenue

Phoenix, AZ 85007

If you have any questions, call ADHS–VBZD staff at (602) 364-4562.

*Denoting the leg band color is necessary as there may be overlapping numbers (but different colors) at different sentinel flock sites. Use “G” for green, “Y” for yellow, “R” for red, etc.

February 2006



MOSQUITO SURVEILLANCE PROTOCOL

Dear Mosquito Hunter:

Thank you for your participation in the Arizona arbovirus surveillance program. As you know, this program conducts surveillance for at least two mosquito-borne encephalitis viruses; St. Louis encephalitis (SLE) and West Nile virus (WNV). The goal of this surveillance program is to detect and monitor arbovirus activity throughout the state so as to identify areas of increased risk and to help guide risk reduction efforts.

You will need CO₂ trap(s), a mechanical aspirator, and screw cap vials for adult mosquito collections. We will provide this equipment (as long as supplies last). If possible, please collect mosquitoes in your area at least once per month from April through October. We will identify mosquito species in all samples received. We will prioritize laboratory testing for the *Culex* species. However, species within other genera will be selectively tested as well. To collect mosquitoes, please follow the protocol below:

(1) Bait the trap with at least two pounds of dry ice to last all night, and hang the trap close to sun down. Hang CO₂ trap(s) with the bait can and/or motorized fan at shoulder height. Hang it from a tree limb or other structure in a place that is likely to have some shade from the east side so that the samples don't get blasted by the morning sun. Also, hang it in a safe place to avoid theft or vandalism. You have the option of turning off the mini-light so as to be more discreet. The capture net hangs below the fan. If the night is likely to be breezy, it may be necessary to secure the net with a rubber band.

(2) Harvest your catch in the morning by pinching off the capture net while the fan is still running. Keep the mosquitoes cool and shaded until you are ready to process them into vials. When you are ready to process the mosquitoes, chill the mosquitoes briefly on dry ice (approximately 30 - 60 seconds) to immobilize them. Then aspirate them into the plastic capsule. If the mosquitoes are beginning to move within the capsule, chill them again briefly to immobilize them. Then hold the capsule with the tube over the vial and tap the mosquitoes down the tube into the vial. Please DO NOT over-pack the vials as this damages the mosquitoes and makes identification difficult. Screw the cap on securely.

(3) Label the vial with the following information: Date, Location, and Collector's Name. White medical tape works well for labels. Seal the vial(s) inside a plastic bag so as to prevent CO₂ gas from penetrating the vial/sample. Place the vial(s) in the dry ice. From this point on, the sample must remain cold all the way to the ADHS Vector Lab.

OVER⇒

(4) Ship the sample on dry ice to:

**Arizona Department of Health Services
Vector-Borne Diseases Program, Suite 140
Attn: Michael Fink
150 North 18th Avenue
Phoenix, Arizona 85007-3237**

PLEASE DO NOT SEND THEM TO THE STATE LAB

Be sure to:

- A. Pack the sample in enough dry ice to last two days.**
- B. Collect and ship the mosquitoes early in the week.
Do not ship mosquitoes on a Thursday or Friday as they may not arrive before the weekend.**
- C. Ship them by overnight delivery.**
- D. Please notify us by phone (602) 364-4562 to let us know when samples are coming our way.**

Thanks again for your help and good hunting!!!!

If you have any questions, feel free to call VBZD staff at (602) 364-4562.

2005 WEST NILE VIRUS SURVEILLANCE

ARIZONA VETERINARY DIAGNOSTIC LABORATORY

Department of Veterinary Science and Microbiology
The University of Arizona
2831 N. Freeway
Tucson, AZ 85705-5021
Phone: (520) 621-2356 Fax: (520) 626-8696
AzVDL@ag.arizona.edu

Shaded Areas For Lab Use Only

Accession #:

Diagnostician:

Courier:

Date received:

Client Number:

Submitter:	<input type="checkbox"/>	WNV Surveillance Only (No Charge)
Affiliation:	<input type="checkbox"/>	Complete Diagnostic Workup - Bill to:
Address:	Name:	
City/State/Zip code:	Address:	
County:	City/State/Zip code:	
Phone:	Phone:	
Fax:	Fax:	

Species:	Animal ID:	Number dead:
Age:	Date of death(s):	Number sick:
Sex:	Euthanized? Y __ N __	Number submitted:

Specimens Submitted:	1) - 2) - 3) - 4) - 5) -
(If other than whole bird)	

Briefly describe symptoms observed or if found dead:

Have other sick or dead birds been observed:

Location where specimen found: (street address, nearest crossroads, Zip Code); and (type of surroundings, i.e., agricultural, industrial, residential)

Other Comments:

Phone report:	Written report faxed:	Billed:	Pre-paid:
		Completed:	

**Arizona Department of Health Services
Bird Death Questionnaire Form**

This form is designed for the collection of information in the event a person from the public calls with a report of bird death sighting(s).

Date Form Completed _____ Information taken by: _____

Dead Birds Found by: Name: _____

Day Phone _____ Evening Phone: _____

Address: _____

City & State: _____ Zip: _____

Email: _____

Question	Response
1. What type of bird? (species if possible)	
2. How many birds (and of each species)?	
3. Age of the bird (baby, adult, old)?	
4. At what address were the birds found? (If no address, nearest cross streets)	
5. Over how large of an area were they found?	
6. Do they have any signs of traumatic injury? (e.g. large wounds or cuts, broken wing, feathers spread on the ground)	
7.a) Do the birds appear normal other than being found dead? (Are they very "skinny" or do the birds look like as if they were eating well?) 7.b) Were the birds seen before death; how were they acting?	
8. Is there a suspicion of poisoning?*	
9. Have pesticides been sprayed in the area recently?*	
Comments:	

Was bird submitted to AzVDL?

* Tests for identification of toxins/pesticides in bird carcass will not be conducted (unless requested and paid for by submitter). Please fax completed form to your county environmental health program.

2006 WEST NILE VIRUS SURVEILLANCE SUBMISSION GUIDELINES

Arizona Veterinary Diagnostic Laboratory

- 1) Please refer to the *West Nile Virus Surveillance: Selection Criteria for Bird Submissions*
- 2) Recently dead birds only. Do NOT submit birds with chronic illness OR non-neurological illness prior to death.
- 3) Preference for corvids (crows, ravens, jays), raptors, exotic species (especially from zoos), grackles, sparrows, and finches. Baby birds, pigeons, and indoor pet birds will NOT be accepted for WNV testing. Doves are not likely to be sick with West Nile virus. (Please refer to *Selection Criteria* for further information.)
- 4) Wear protective gloves, or if not available, use an inverted plastic bag to pickup dead birds.
- 5) Place each specimen in a separate sealable plastic bag and refrigerate **as soon as possible**. **Do not freeze.**
- 6) Add submission form with information including: name, address, phone of submitting party, specific address where bird was found, history including clinical signs or evidence of illness in other birds, species, age if known, and date found. Please fill out separate forms for birds collected from different sites.
- 7) Ship overnight in provided Saf-T-Pak® with ice packs, as described on the AzVDL website at <http://microvet.arizona.edu/AzVDL/index.shtml> (click on “packing and shipping”).
- 8) Appropriate leak-proof shipping containers (ex. Saf-T-Pak®) must be used, which includes a sealable biohazard bag, a special white, absorbent envelope, and a shipping container consisting of a Styrofoam box which fits perfectly inside the provided cardboard box, with specific labeling:
 - a. Place bird in the provided clear, sealable biohazard bag (small and large sizes of these bags are available).
 - b. Place the bagged bird inside the provided white, absorbent envelope from Saf-T-Pak and seal this envelope (small and large sizes of these envelopes are available).
 - c. Place the bagged and enveloped bird(s), sealed ice packs, and submission form (in a separate Ziploc bag to keep dry), inside the shipping container. Do not use loose ice.
 - d. Shipping container is a styrofoam container encased in a cardboard box.
- 9) Properly seal the shipping container with heavy duty shipping tape, attach the shipping document (usually a FEDEX air-bill).
- 10) The outside of the shipping container should have affixed the following labels:
 - a. UN3373 (can be printed on box, not necessarily a label).
 - b. "Diagnostic Specimen packed in accordance with IATA Packing Instructions 650"
- 11) Ship to:

Arizona Veterinary Diagnostic Laboratory
2831 North Freeway

Tucson, Arizona 85705-5021

Do not ship on Friday. Hold bird in refrigerator until Monday and ship as above. If desired, use the AzVDL Fed Ex number and complete the shipping tag with "bill recipient". The account number is 1381-3559-4. Designate the "Priority Overnight". **DO NOT CHECK THE "FIRST OVERNIGHT" BOX.**

- 12) Saf-T-Pak containers will be returned, refurbished with biohazard bags and white absorbent envelopes, and condition of outside labels will be checked for condition.
- 13) The Arizona Department of Health Services (ADHS) and the University of Arizona Veterinary Diagnostic Laboratory (AzVDL) support West Nile virus testing. AzVDL staff will perform immunohistochemical staining and/or oral swabs testing specific for West Nile virus only. **If additional diagnostic testing is desired, please contact AzVDL staff at (520) 621-2356 to make arrangements for additional tests and for appropriate billing.**
- 14) For questions: Call AzVDL (520) 621-2356 or ADHS at (602) 364-4562.



Arizona Department of Health Services



DEAD BIRD SURVEILLANCE For West Nile Virus

Report bird deaths to your local health department (see list on reverse on
back)
if the following applies:

- bird is freshly dead <24 hours
- not scavenged, no odor, no maggots
 - body not soft and mushy
- not a baby or young bird, not a pigeon, not a dove

Bag and chill if possible and call the environmental health office of your
local health department (see back or our website at www.westnileaz.com)

**Dead Bird and Mosquito Problem Reporting to
Local Health Departments of Arizona**

Apache County Health Department

St. Johns, AZ (928) 337-4364, ext. 7140

Cochise Health Department

Bisbee, AZ (520) 432-9434 or 432-9440

FAX (520) 432-9480

1-800-423-7271 outside of local calling area

Benson (520) 586-3686

Douglas (520) 805-5601

Sierra Vista (520) 803-3915

Willcox (520) 384-4662

www.cochisecounty.com

**Coconino County Department of
Health Services**

Flagstaff, AZ

(928) 226-2741, FAX (928) 226-2711

Gila County Health Department

Globe, AZ (928) 425-5882

Payson, AZ (928) 474-1210

www.gilacountyaz.org

Graham County Health Department

Safford, AZ

(928) 428-1962, FAX (928) 428-8074

Greenlee County Health Department

Clifton, AZ (928) 865-2601

La Paz County Health Department

Parker, AZ (928) 669-1100

**Maricopa County Environmental
Services**

Phoenix, AZ (602) 506-0700

www.maricopa.gov/ENV SVC/FORMS/deadbird_start.asp

Mohave County Department of Health

Kingman, AZ (928) 757-0901

Navajo County Public Health Services

Holbrook, AZ

(928) 524-4750 FAX (928) 532-6050

Navajo Nation (Reservation)

Chinle Veterinary Clinic (928) 674-2069

Tuba City Veterinary Clinic (928) 283-4644

Window Rock Veterinary Clinic 928 871-6615

Navajo Nation Fish and Wildlife Services

(928) 871-6451

Pima County Health Department

Consumer Health & Food Safety

Tucson, AZ (520) 740-3191

Pinal County Health & Human Services

Florence, AZ

1-800-231-8499, ext. 6559

(520) 866-6559 FAX (520) 866-6007

**Santa Cruz County Health
Department**

Nogales, AZ (520) 375-7900

Yavapai County Community Health Serv.

Prescott, AZ (928) 771-3149

Cottonwood (928) 649-5078

www.co.yavapai.az.us/departments/health/EnvHealth/WestNile.aspx

Yuma County Dept. of Public Health

Yuma, AZ

(928) 317-4584, ext. 1632 or 1633

2006 West Nile Virus Surveillance Selection Criteria for Bird Submissions

Listed below are criteria designed to assist in making the decision of whether or not to submit a dead bird to the Arizona Veterinary Diagnostic Laboratory (AzVDL) for West Nile virus (WNV) surveillance.

- ❑ Is the carcass intact and fresh (**dead less than 24 hours**)?
 - Carcasses that are decomposed are usually of limited diagnostic value. If the carcass has an odor, is soft and mushy, has skin discoloration, feathers or skin that easily rubs off, or has maggots present, it is too decomposed for testing
 - An exception to the rule above: high priority specimens such as ravens, crows, grackles, sparrows, finches and raptors may still be submitted for testing even if they are already a few days (approximately 1-3 days) post mortem. Birds that commonly develop high viremias during infection may still be testable using an oral swab test.
 - If the carcass is very light in weight for the size of the bird and the wings are not moveable, then the carcass may be too dried out.
- ❑ How old is the bird?
 - **We are not accepting young birds for WNV surveillance at this time.** Dead baby birds are already too common and suffer high mortality due to other reasons. They do not make good sentinels for WNV surveillance.
- ❑ Are there signs of avicide use?
 - **Were multiple birds found dead in close proximity to each other? If yes, then WNV is not likely to be the cause of death.** Purposeful or accidental toxin exposure is a more likely cause of death in this setting.
- ❑ What species is the bird?
 - Almost all species of birds will be accepted for WNV testing. **Corvid** species (e.g. crows, ravens, jays, magpies), raptors, and exotic avian species (if housed outside) are the most likely to die suddenly from WNV infection. Other species such as grackles, sparrows, finches, may also show considerable susceptibility/mortality. Doves are less likely to die from West Nile virus, so please be selective when submitting these.
 - **We are NOT accepting submissions of pigeons, as they do not appear to be good WNV sentinels.** Birds housed indoors (with screened windows) will not be accepted for submission, as they would not be exposed to mosquito bites.

Birds submitted for WNV surveillance will be tested with immunohistochemical staining (IHC) of tissues or an oral swab test specific for WNV. Any further diagnostic workup (testing) must be requested, and will be billed to the submitter.

If you have questions about whether to submit a bird for WNV surveillance, please call AzVDL at (520) 621-2356 or the Arizona Department of Health Services (602) 364-4562.

March 2006



SENTINEL CHICKEN SURVEILLANCE PROTOCOL

NOTE: We will be using the same protocol as in 2005.

The Arizona State Health Laboratory (ASHL) and the University of Arizona-Veterinary Diagnostic Laboratory (UA-VDL) will be testing chicken bloods by IgG assay (IFA). **NOTE: please send chicken bloods to the same laboratory address that you used last year (see below).** Chicken bloods will need to be collected on filter paper strips. The strips are cut to the size of 0.5 X 3 inches from standard Whatman filter paper which can be obtained through any laboratory/medical supply company. Or, filter paper can be obtained from the ADHS–Vector-Borne Diseases Program by calling (602) 364-4562.

As was done in previous years, please set-up flocks with 6 - 10 chickens each. You can keep some spare chickens on hand to replace any birds that are lost during the season.

Sentinel chicken surveillance will run from April through October. You have the option of bleeding once every two or three weeks. IgG antibody should persist through most of the season after the chicken(s) seroconverts so you won't miss seroconversions by extending the bleeding interval. You will, however, sacrifice some time sensitivity with the sentinel chicken program.

Please follow the protocol below:

1. Label one end of the filter paper strip w/ the identification number of each bird and the bleeding date. Be sure to use a permanent ink pen. For consistency, please use the following ID number system:

Ex. 06G15YUA:	06	G	15	YU	A, B, C, etc.
Date	Year	Green	Leg Band #	Yuma	Site Code
		*(Leg Band Color)		(city/town)	(unique ID)

The numbered leg bands can be recycled from last year, or new ones can be obtained through the ADHS - VBZD Program. Call ADHS-VBZD staff @ (602) 364-4562.

2. Perform a lancet prick to the comb or wing vein of the chicken and soak / saturate a full inch of the strip with blood. It may be helpful to mark-off one inch on the strip prior to the bleeding. Do not blood soak the labeled end of the strip. Air dry the blood soaked strip, and be careful not to contaminate the sample with dirt, or blood from other strips, etc.
3. Staple the strips in sequential order on a 5" X 7" card. The blood soaked end